WHAT IS CLAIMED IS:

1. A method of calculating transit traffic in a router including a plurality of interfaces transmitting or receiving a packet in a form of octets, comprising the steps of:

(a) preparing a routing table having an interface column defining one of the plurality of interfaces which is interconnected to a router to which a packet is to be transmitted;

(b) generating a transit traffic matrix of a subject interface whose transit traffic is to be calculated and initializing the transit traffic matrix;

(c) obtaining an interface traffic matrix of the subject interface, the interface traffic matrix having packet and octet columns in which numbers of packets and octets received are stored respectively;

(d) searching the routing table with respect to the interface traffic matrix obtained to locate an entry of the routing table matching with the interface traffic matrix to obtain a value of the interface column of the located entry;

(e) determining whether or not the obtained value of the interface column corresponds to the subject interface; and

(f) adding, if the obtained value of the interface column is determined corresponding to the subject interface, values of the packet and octet columns of the subject interface in the interface traffic matrix to the transit traffic matrix.

2. The method in accordance with claim 1, further comprising the step (g) of collecting data to be stored in the routing table of the router and the interface traffic matrix of the subject interface.

3. The method in accordance with claim 1, further comprising the steps of:

(g) after steps (a) through (f), correcting packet and

octet values in a frame of the transit traffic matrix defined by one and the same interface of the plurality of interfaces as a source and a destination; and

(h) generating a transit traffic matrix between desired ones of the plurality of interfaces from the transit traffic matrix corrected.

4. A method of calculating transit traffic in a router including a plurality of interfaces transmitting or receiving a packet in a form of octets, comprising the steps of:

(a) preparing a routing table having an interface column defining one of the plurality of interfaces which is interconnected to a router to which a packet is to be transmitted;

(b) holding interface-Use columns each associated with one of the plurality of interfaces;

(c) holding, when transferring a packet, an interface identification assigned to one of the plurality of interfaces which has received a packet, together with the packet;

(d) adding a packet value and an octet value to one of the interface-Use columns which corresponds to the interface identification held;

(e) generating a preprocessing table for a subject interface whose transit traffic is to be calculated from the interface column of the routing table and one of the interface-Use columns which is associated with the subject interface, the preprocessing table having an interface column storing a value defining any of the plurality of interfaces;

(f) searching the preprocessing table to determine which of the values in the interface column corresponds to the subject interface; and

(g) adding, if one of the values in the interface column corresponds to the subject interface, values of the packet and octet columns corresponding to the subject interface in the

preprocessing matrix to the transit traffic matrix.

5. A method of calculating transit traffic in a router including a plurality of interfaces transmitting or receiving a packet in a form of octets, comprising the steps of:

(a) preparing a routing table having an interface column defining one of the plurality of interfaces which is interconnected to a router to which a packet is to be transmitted;

(b) generating a transit traffic matrix having rows and columns corresponding to subject interfaces whose transit traffic is to be calculated;

(c) initializing the transit traffic matrix;

(d) obtaining interface traffic matrices of the subject interfaces, each of the interface traffic matrices having packet and octet columns in which numbers of packets and octets received are stored respectively;

(e) searching the routing table with respect to the interface traffic matrices obtained to locate an entry of the routing table matching with each of the interface traffic matrices to obtain a value of the interface column of the located entry;

(f) determining to which of the subject interfaces the obtained value of the interface column corresponds; and

(g) adding, if one of the subject interfaces is determined which corresponds to the obtained value of the interface column, values of the packet and octet columns of the subject interface in the interface traffic matrix to the transit traffic matrix.

6. The method in accordance with claim 5, further comprising the steps of:

(h) adding the values in the rows of the transit traffic matrix to each other, and adding the values in the columns of

the transit traffic matrix to each other to produce totals of the rows and columns; and

(i) summing up the total of the rows and the total of the columns to determine transit traffic of the subject interfaces.

7. An apparatus for calculating transit traffic in a router including a plurality of interfaces transmitting or receiving a packet in a form of octets, comprising:

a circuit for generating a transit traffic matrix of a subject interface whose transit traffic is to be calculated and initializing the transit traffic matrix;

a circuit for obtaining an interface traffic matrix of the subject interface having packet and octet columns in which numbers of packets and octets received are stored respectively, and searching with respect to the interface traffic matrix obtained a routing table having an interface column defining one of the plurality of interfaces which is interconnected to a router to which a packet is to be transmitted to locate an entry of the routing table matching with the interface traffic matrix to obtain a value of the interface column of the located entry;

a circuit for determining whether or not the obtained value of the interface column corresponds to the subject interface; and

a circuit for adding, if the obtained value of the interface column is determined corresponding to the subject interface, values of the packet and octet columns of the subject interface in the interface traffic matrix to the transit traffic matrix.

8. The apparatus in accordance with claim 7, wherein the router comprises a circuit for collecting data to be stored in the routing table of the router and the interface traffic

matrix of the subject interface.

9. The apparatus in accordance with claim 7, further comprising:

a circuit for correcting packet and octet values in a frame of the transit traffic matrix defined by one and the same interface of the plurality of interfaces as a source and a destination; and

a circuit for generating a transit traffic matrix between desired ones of the plurality of interfaces from the transit traffic matrix corrected.

10. An apparatus for calculating transit traffic in a router including a plurality of interfaces transmitting or receiving a packet in a form of octets, comprising:

a circuit for holding interface-Use columns each associated with one of the plurality of interfaces;

a circuit for holding, when transferring a packet, an interface identification assigned to one of the plurality of interfaces which has received a packet, together with the packet;

a circuit for adding a packet value and an octet value to one of the interface-Use columns which corresponds to the interface identification held;

a routing table having an interface column defining one of the plurality of interfaces which is interconnected to a router to which a packet is to be transmitted;

a circuit for generating a preprocessing table for a subject interface whose transit traffic is to be calculated from the interface column of the routing table and one of the interface-Use columns which is associated with the subject interface, the preprocessing table having an interface column storing a value defining any of the plurality of interfaces; and

a circuit for searching the preprocessing table to determine which of the values in the interface column corresponds to the subject interface, and adding, if one of the values in the interface column corresponds to the subject interface, values of the packet and octet columns corresponding to the subject interface in the preprocessing matrix to the transit traffic matrix.

1006657.0000002